

CZ128

FORGING BRASS

DESCRIPTION

CZ128 is a machining brass which combines the contrasting material Properties of machining and cold working exceptionally well. This material is therefore well established in various industries as the standard alloy for machining and cold Working.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	58.50	61.00
Pb	1.50	2.50
Fe	-	0.20
Total Others	-	0.50
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO BS2874 (AS PER TEMPER M)

Range (mm)	From	To	UTS Min (N/mm ²)	PS Min	Elongation Min (%)	Hardness Min	Hardness Max
Round (Dia)	6.00	18.00	380.00	-	22.00	-	-
	18.00	40.00	380.00	-	22.00	-	-
	40.00	75.00	350.00	-	25.00	-	-
Hex (A/F)	6.00	18.00	380.00	-	22.00	-	-
	18.00	40.00	380.00	-	22.00	-	-
	40.00	70.00	350.00	-	25.00	-	-
Square (A/F)	5.00	18.00	380.00	-	22.00	-	-
	18.00	40.00	380.00	-	22.00	-	-
	40.00	60.00	350.00	-	25.00	-	-
Rectangle (Thickness)	6.00	18.00	380.00	-	22.00	-	-
	18.00	40.00	380.00	-	22.00	-	-
	40.00	50.00	350.00	-	25.00	-	-

PHYSICAL PROPERTIES

Density	8.44 g/cm ³
Electrical Conductivity % IACS at 68°F	24
Thermal Conductivity Btu/ sq ft/ ft hr/ °F at 68°F	109 W/m.K
Thermal expansion coefficient	20.4 10 ⁻⁶ /K
Modulus of Elasticity	102 Gpa

FABRICATION PROPERTIES

Machinability (CuZn39Pb3 = 100 %)	90%
Capacity for being cold worked	fair
Capacity for being hot worked	excellent
Resistance welding (butt weld)	good
Inert gas shielded arc welding	poor
Gas welding	Poor
Hard soldering	fair
Soft soldering	excellent
Melting range	895-900 °C
Hot working	650-750 °C
Soft annealing	450-650 °C (1-3 hr)
Thermal stress relieving	200-300 °C (1-3 hr)

TYPICAL USES

- Furniture
- Window fittings
- Valve
- Valve parts
- Decorative metalwork
- Clock and instrument
- Casings
- Gears
- Cams
- Fasteners